



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,612	01/23/2004	Chris McKenzie	29031.00	7278
22465	7590	05/04/2005	EXAMINER	
PITTS AND BRITTIAN P C			DUONG, THO V	
P O BOX 51295				
KNOXVILLE, TN 37950-1295			ART UNIT	PAPER NUMBER
			3743	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/763,612	MCKENZIE ET AL.
	Examiner Tho v Duong	Art Unit 3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 08 February 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-11, 14-19, 24 and 25 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-11, 14-19, 24 and 25 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Receipt of applicant's amendment filed 2/8/2005 is acknowledged. Claims 1-11,14-19 and 24-25 are pending.

Response to Arguments

Applicant's arguments with respect to claims 1-11,14-16 and 24-25 have been considered but are moot in view of the new ground(s) of rejection.

In view of applicant Remarks, the objection to the specification has been withdrawn.

In view of applicant Remark, the 112th rejection against claims 17-19 have been withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2,3,7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claimed limitation of "wherein said second heat exchanger includes an air chamber" and "a means for forming an air chamber in said second heat exchanger" renders the scope of the claim indefinite since it is not clear if applicant is claiming the "air chamber" or "means for forming an air chamber" as being additional chamber to the "air trap chamber" which recited in claims 1 and 6. It does not appear in the disclosure that the air chamber and the air trap chamber are two different chambers.

Claims 2,3,7 and 8 are further rejected as can be best understood by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Feher (US 5,117,638). Feher discloses (figures 1-2, and 6) an apparatus comprising the thermoelectric device (16) is considered to read as a means for changing a temperature of a liquid; pump (23) is considered to read as a means for transferring the liquid to a heat exchanger; the coils (34) is considered to read as a means for conducting thermal energy between the liquid and the seat; the switch mode is considered to read as means for controlling a temperature of the liquid; and heat exchanger (18) is considered to read as a means for transferring thermal energy between the thermoelectric device and the environment.

Claims 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Abadilla et al. (US 5,564,276). Abadilla discloses (figures 1-6 and column 3, lines 35-52) an apparatus comprising the thermoelectric device (18) is considered to read as a means for changing a temperature of a liquid; a pump (12) is considered to read as a means for transferring the liquid to a heat exchanger; the fluid circuit within seat (15) is considered to read as a means for conducting thermal energy between the liquid and the seat; a controller (14) is considered to read as means for controlling a temperature of the liquid; and a heat exchanger (11) is considered to read as a means for transferring thermal energy between the thermoelectric device and the environment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-11 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feher (US 5,117,638) in view of Spry (US 6,732,534). Feher discloses (figures 1-2, and 6) an apparatus comprising a first heat exchanger (34) coupled to a seat (24); a second heat exchanger (20) in fluid communication with the first heat exchanger; a first pump (23) for forcing a first heat transfer fluid between the first heat exchanger and the second heat exchanger; a thermoelectric device (16) having a first surface and a second surface (upper and bellow); the first surface (bellow) thermally coupled to the second heat exchanger (20); and a third heat exchanger (18) thermally coupled to the second surface (upper) of the thermoelectric device. Feher further discloses (figure 10, column 2, lines 32-48) a controller providing power (electric current) to the thermoelectric device for selectively heating or cooling one of the surface depending on the direction of the electric current and a temperature selector (mode switch) in communication with the controller. As regarding claim 10, Feher discloses (column 2, lines 32-48) that the thermoelectric device (16) works in a heating mode or a cooling mode dependently on the direction of the electric current passing through the thermoelectric (the direction of the electric current depends on the polarity of the current voltage). Since the mode switch selects the system to work in a heating mode or cooling mode, the mode switch is inherently capable of performing a function of reversing a polarity of a direct current voltage applied to the

thermoelectric device (16). With regarding claim 11, Feher discloses (figure 6 and column 5, lines 47-67) a blower that blow air between the third heat exchanger (18) to a radiator (chamber in the seat connected to the third heat exchanger by tubes 14). With regarding claims 7 and 8, the heat exchanger (18) is interpreted to be a second heat exchanger; the cooling or heating chamber in the seat is considered to be a first heat exchanger coupled to the seat; and the heat exchanger (20) is considered to be a third heat exchanger. Feher further discloses (figure 6, and column 5, lines 46-67) partitions (74), which is an equivalent as a means for forming air trap chambers (75) in the second heat exchanger (18), which is capable to contain air. Feher does not disclose that the controller including a ramp circuit that applies power to the thermoelectric device over a specific period of time. Spry discloses (figure 3, column 2, lines 10-23 and column 5, line 1-column 6, line 17) a temperature control device that has a thermoelectric module (22) equipped with a ramp circuit (32) applying powers the thermoelectric device (22) as a controller for the purpose of preventing thermal shock to the thermoelectric device so that life of the thermoelectric module can be extended. Since both Feher and Spry are from the same field of endeavor and/or analogous art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Spry's teaching in Feher's device for the purpose of preventing thermal shock to the thermoelectric device so that life of the thermoelectric module can be extended.

Claims 6-11,15-16 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abadilla in view of Spry (6,732,534). Abadilla discloses (figures 1-6 and column 3, lines 35-52) an apparatus comprising a first heat exchanger coupled to a seat (15); a second heat exchanger (20) in fluid communication with the first heat exchanger; a first pump (12) for

forcing a first heat exchanger fluid between the first heat exchanger and the second heat exchanger; a thermoelectric device (18) having a first surface and a second surface; the first surface thermally coupled to the second heat exchanger; a third heat exchanger (20) thermally coupled to the second surface of the thermoelectric device (18); a radiator (11) in fluid communication with the third heat exchanger; a second pump (13) for forcing a second heat transfer fluid between the third heat exchanger and the radiator; a controller (14) providing power to the thermoelectric device for selecting heating or cooling on one of the surfaces; and the second heat exchanger (20) including partitions forming channels (25) which is equivalent as a means for forming an air chamber since the channels (25) or air chap channels (25) is capable of containing any air which present in the heat exchanger. Abadilla further discloses (column 3, line 40- column 6, lines 48) temperature selector (55); switches (67,69,82,84), which is also a safety cutout device, for reversing a polarity of a direct current voltage applied to the thermoelectric device or for stopping a direct current voltage applied to the thermoelectric device; and a thermistor (51) for sensing a temperature. Abadilla does not disclose that the controller including a ramp circuit that applies power to the thermoelectric device over a specific period of time. Spry discloses (figure 3, column 2, lines 10-23 and column 5, line 1-column 6, line 17) a temperature control device that has a thermoelectric module (22) equipped with a ramp circuit (32) applying powers the thermoelectric device (22) as a controller for the purpose of preventing thermal shock to the thermoelectric device so that life of the thermoelectric module can be extended. Since both Abadilla and Spry are from the same field of endeavor and/or analogous art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Spry's teaching in Abadilla's device for the purpose of preventing

thermal shock to the thermoelectric device so that life of the thermoelectric module can be extended.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feher and Spry in view of Park (US 6,006,524). Feher and Spry substantially disclose all of applicant's claimed invention as discussed above except for the limitation of a safety cutoff switch and a thermistor for sensing the temperature. Park discloses (figures 2, 7 and column 3, line 1 – column 4, line 60) a cool system that utilizes a thermoelectric (10) for selecting of cooling or heating mode for the system, wherein the cooling system is partially controlled by thermistors (231,232) for sensing a temperature and a safety cutout device (SW1) for suspending the operation of the thermoelectric element (10) if the sensing temperature exceeds a selected temperature. The safety cutout device and the thermistors has been served for the purpose of enabling the cooling system to work in an appropriate mode depending on the pre-set temperature, which set by the user. Since Feher and Park are both from the same field of endeavor and/or analogous art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Park's teaching in Feher's device for the purpose of enabling the cooling system to work in an appropriate mode depending on the pre-set temperature, which set by the user.

Claims 1-5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abadilla and Spry in view of Lee (US 6,701,719). Abadilla discloses (figures 1-6 and column 3, lines 35-52) an apparatus comprising a first heat exchanger coupled to a seat (15); a second heat exchanger (20) in fluid communication with the first heat exchanger; a first pump (12) for forcing a first heat exchanger fluid between the first heat exchanger and the second heat

exchanger; a thermoelectric device (18) having a first surface and a second surface; the first surface thermally coupled to the second heat exchanger; a third heat exchanger (20) thermally coupled the second surface of the thermoelectric device (18); a radiator (11) in fluid communication with the third heat exchanger; a second pump (13) for forcing a second heat transfer fluid between the third heat exchanger and the radiator; a controller (14) providing power to the thermoelectric device for selecting heating or cooling on one of the surfaces; and the second heat exchanger (20) including chambers (25) which is capable of containing any air which present in the heat exchanger. Abadilla further discloses (column 3, line 40- column 6, lines 48) temperature selector (55); switches (67,69,82,84), which is also safety cutout device, for reversing a polarity of a direct current voltage applied to the thermoelectric device or for stopping a direct current voltage applied to the thermoelectric device; and a thermistor (51) for sensing a temperature. Abadilla does not disclose a first heat exchanger is a bladder with channels for directing the first heat transfer fluid through the bladder. Lee discloses (figures 6,9 and column 3, line 56- column 41 line 17) a cooling system for a seat (40) that has a heat exchanger formed of liquid tight bladder through which a heat transfer fluid (6) is circulated through channels formed by elements (42) so that the heat transfer fluid passes smoothly and evenly through the seat (4) while achieving the heat exchanging effect on the seat. Since Abadilla and Lee are both from the same field of endeavor and/or analogous art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Lee's teaching in Abadilla's seat cooling system for the purpose of passing the heat transfer fluid smoothly and evenly through the seat while achieving the heat exchange effect on the seat. Abadilla does not disclose that the controller including a ramp circuit that applies power to the

thermoelectric device over a specific period of time. Spry discloses (figure 3, column 2, lines 10-23 and column 5, line 1-column 6, line 17) a temperature control device that has a thermoelectric module (22) equipped with a ramp circuit (32) applying powers the thermoelectric device (22) as a controller for the purpose of preventing thermal shock to the thermoelectric device so that life of the thermoelectric module can be extended. Since both Abadilla and Spry are from the same field of endeavor and/or analogous art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Spry's teaching in Abadilla's device for the purpose of preventing thermal shock to the thermoelectric device so that life of the thermoelectric module can be extended.

Note: Since claims 3, 8 and 17-19 use the means plus function format, they give rise to the interpretation under 35 U.S.C 112 sixth paragraph in light of and consistent with the written description of the invention in the application.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

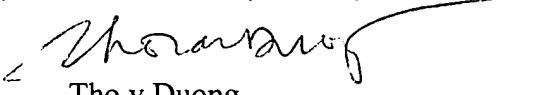
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho v Duong whose telephone number is 571-272-4793. The examiner can normally be reached on M-F (first Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennet can be reached on 571-272-4791. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Tho v Duong
Examiner
Art Unit 3743



TD
April 29, 2005